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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,183	04/01/2004	Takehiro Yoshida	2004_0504A	6452

513   7590   09/24/2007
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EXAMINER
KANG, INSUN

ART UNIT	PAPER NUMBER
2193	

MAIL DATE	DELIVERY MODE
09/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/814,183	YOSHIDA ET AL.
	Examiner	Art Unit	
	Insun Kang	2193	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 June 2004 and 01 April 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-10</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-10</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>01 April 2004</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>6/5/2004 and 4/1/2004</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1. This action is responding to application papers dated on 6/5/2004 and 4/1/2004.

2. Claims 1-10 are pending in the application.

Drawings

3.   Figure 12 and 13 should be designated by a legend such as --Prior Art-- because only that

which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37

CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application.

The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37

CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not

accepted by the examiner, the applicant will be notified and informed of any required corrective

action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4.   The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 101

5.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions
> and requirements of this title.

6.   Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to

non-statutory subject matter.

        Claims 1-5 are non-statutory because they are directed to a "program product" that

includes a signal holding medium that can be a transmission medium as defined in the instant

specification (i.e. paragraphs 0118,0119, and claim 5). Such medium does not have a physical

structure, rather it is the physical characteristics of a form of energy, such as a frequency,

voltage, or the strength of a magnetic field, define energy or magnetism per se, and, thus, does

not fit within the definition of the categories of patentable subject matter set forth in § 101.

Therefore, the claims are non-statutory. "A storage medium" is recommended.

Claim 6 is non-statutory because it is directed to a "program linking program" that is a

disembodied arrangement so as to be called a "computer program" or compilation of facts,

information, or data *per se*, without creating any functional interrelationship, either as part of the

stored data or as part of the computing processes performed by a computer ("acts") or computer

storage medium so as to enable the computer to perform the claimed program. Therefore, the

claimed program turns out to be an abstract idea that does not fit within the definition of the

categories of patentable subject matter set forth in § 101. Therefore, the claim is non-statutory.

"A program linking program embodied on a computer storage medium" is recommended.

The following link on the World Wide Web is for the United States Patent And

Trademark Office (USPTO) policy on 35 U.S.C. §101. The following link on the World Wide

Web is for the United States Patent And Trademark Office (USPTO) policy on 35 U.S.C. §101.

http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf

Claim Objections

7.   Claim 5 is objected to because of the following informalities: it appears that "at least one

among" needs to be corrected to "at least between." Appropriate correction is required.

Claim Rejections - 35 USC § 112

8.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9.   Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing

to particularly point out and distinctly claim the subject matter which applicant regards as the

invention.

Claim 9 recites the limitation "the plural programs" in line 3. There is insufficient

antecedent basis for this limitation in the claim. Interpretation: "the plural unlinked programs."

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11.   Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiwata (US

Pub.No. 2002/0016957 published on 2/7/2002) in view of Fetzer et al. (US Patent 6,832,302)

hereafter Fetzer.

Per claim 1:

Ishiwata discloses:

- A program linking program, which causes a computer having a memory to

  function as: linking means, to link one or a plurality among plural unlinked

programs, advancing toward the completion of one or more linked programs (i.e. "A linker starting station 12 starts a liner 17 based on the linking order held by the linking order section 11a and causes it to execute the linking process, and thus an executable object 18 is formed," page 4, 0086)

- storage means, to cause the memory to store the one or more linked programs, either before or after completion (i.e. "the storing section 14 stores the minimum program size out of the formed executable objects 18 by repeating respective steps by a repeating section 15," page 4, 0090);

- and, management means, to cause the linking means to preferentially perform linking of the plural unlinked programs in predetermined priority order and to a maximum limit (i.e. "The linking order forming section 51 is a unit that forms the linking order of the intermediate objects 56," page 7, 0161; "the minimum program size and the linking order of the intermediate objects 56 used when the executable object 58 having this minimum program size is obtained are stored in the storing section 54," page 7, 0165).

Ishiwata discloses obtaining the minimum program size by the linker order forming section but does not explicitly teach ensuring linking within a range in which overflow of a predetermined capacity of the memory does not occur. However, Fetzer teaches such a buffer overflow check was known in the pertinent art, at the time applicant's invention was made, to ensure sufficient memory space to accommodate data storage (i.e. col. 3 lines 50-60). It would have been obvious for one having ordinary skill in the art to modify Ishiwata's disclosed system to incorporate the teachings of Fetzer. The modification would be obvious because one having

ordinary skill in the art would be motivated to perform a memory boundary check to prevent

buffer overrun that can cause potential memory fault as suggested by Fetzer (i.e. col. 3 lines 50-

60).

Ishiwata discloses a signal holding medium ("a storage section," page 7, 0165).

Per claim 2:

Ishiwata further discloses:

- wherein the management means causes the linking means to perform linking, and

  as a result determine the maximum limit(i.e. "The linking order forming section

  51 is a unit that forms the linking order of the intermediate objects 56," page 7,

  0161; "the minimum program size and the linking order of the intermediate

  objects 56 used when the executable object 58 having this minimum program size

  is obtained are stored in the storing section 54," page 7, 0165).

Per claim 3:

Ishiwata further discloses:

- wherein the management means determines the maximum limit by evaluating the

  sizes of the one or more linked programs at each stage of linking, without causing

  the linking means to perform linking (i.e. "a comparing step which compares

  program size of the executable objects obtained by the linking processing step

  with the program size of a executable objects stored in a storing section every

  time when the liking order is changed," page 1, 0014).

Per claim 4:

Ishiwata further discloses:

- the predetermined priority order is selected from at least one among increasing order of frequency of use of each of the plural unlinked programs to create the one or more linked programs; increasing order of size of each of the plural unlinked programs; increasing order of product of frequency of use of each of the plural unlinked programs to create the one or more linked programs, and size of corresponding one of the plural unlinked programs; decreasing order of time for linking each of the plural unlinked program on execution; and decreasing order of execution frequency of each of the plural unlinked programs accompanying execution of the one or more linked programs (i.e. "based on one genes of a predetermined number are formed first by the linking order forming section 11 to get the executable object 18...the program size of the executable object 18...the minimum value...of the program size," page 5, 0124-0126).

Per claim 5:

Ishiwata further discloses:

- wherein the signal holding medium is at least one among a storage medium and a transmission medium (("a storage section," page 7, 0165).

Per claim 6, it is the program linking program version of claim 1, respectively, and is

rejected for the same reasons set forth in connection with the rejection of claim 1 above.

Per claim 7, it is the program linking device version of claim 1, respectively, and is

rejected for the same reasons set forth in connection with the rejection of claim 1 above.

Per claim 8:

Ishiwata discloses:

- a memory (i.e. memory," page 1, 0004)

- a linking unit, to link one or a plurality among plural unlinked programs,

  advancing toward the completion of one or more linked programs (i.e. "A linker

  starting station 12 starts a liner 17 based on the linking order held by the linking

  order section 11a and causes it to execute the linking process, and thus an

  executable object 18 is formed," page 4, 0086)

- a storage unit, to cause the memory to store the one or more linked programs,

  either before or after completion (i.e. "the storing section 14 stores the minimum

  program size out of the formed executable objects 18 by repeating respective

  steps by a repeating section 15," page 4, 0090);

- a management unit, to cause the linking unit to preferentially perform linking of

  the plural unlinked programs in predetermined priority order and to a maximum

  limit (i.e. "The linking order forming section 51 is a unit that forms the linking

  order of the intermediate objects 56," page 7, 0161; "the minimum program size

and the linking order of the intermediate objects 56 used when the executable

object 58 having this minimum program size is obtained are stored in the storing

section 54," page 7, 0165).

Ishiwata discloses obtaining the minimum program size by the linker order forming

section but does not explicitly teach ensuring linking within a range in which overflow of a

predetermined capacity of the memory does not occur. However, Fetzer teaches such a buffer

overflow check was known in the pertinent art, at the time applicant's invention was made, to

ensure sufficient memory space to accommodate data storage (i.e. col. 3 lines 50-60). It would

have been obvious for one having ordinary skill in the art to modify Ishiwata's disclosed system

to incorporate the teachings of Fetzer. The modification would be obvious because one having

ordinary skill in the art would be motivated to perform a memory boundary check to prevent

buffer overrun that can cause potential memory fault as suggested by Fetzer (i.e. col. 3 lines 50-

60).

Ishiwata further discloses:

- an execution control unit, to execute, among the one or more linked programs

  stored in the memory, a designated program; and wherein the execution control

  unit has runtime linking unit that, when a linked program to be executed is not

  completed as regards linking, completes the linked program to be executed by

  linking one or a plurality of programs from among the plural unlinked programs

  (i.e. "a repeating step for changing the linking orders by the intermediate object

  liking order forming step and executing repeatedly the linking processing step, the

comparing step, and the storing step," page 3, 0069; 0086; 0052;0016).

Per claim 9:

Ishiwata further discloses:

- an acquisition unit to acquire the plural unlinked programs, and a storing unit to

  store the plural programs acquired by the acquisition unit (i.e. "The intermediate

  object linking unit 10 comprises a linking order forming section 11…a linker

  starting section 12…a storing section," page 4 0085).

Per claim 10, it is the method version of claim 1, respectively, and is rejected for the

same reasons set forth in connection with the rejection of claim 1 above.

12.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Insun Kang whose telephone number is 571-272-3724. The

examiner can normally be reached on M-F 8:30-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, MENG AI AN can be reached on 571-272-3756. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300. Information

regarding the status of an application may be obtained from the Patent Application Information

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800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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